AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Listing of Claims:

Claim 1 (Currently Amended): An image processing method comprising:

performing, in parallel, a process of one of an image reading function, an image recording function, an image copying function and an image communicating function, while performing at least another process of ~~an~~ the image reading function, the image recording function, the image copying function and the image communicating function;

storing automatically a file of the image data processed by said performing independently of processes of the image reading function, the image recording function, the image copying function and the image communicating function;

buffering the image data temporarily in a buffer before said storing, said buffer including a first buffer and a second buffer;

causing a DMA transfer request when a storage capacity of at least one of said first and second ~~buffer~~ buffers occupied by the image data reaches a predetermined preset value; and

transferring the image data within said buffer by a DMA transfer over a DMA transfer line based on the DMA transfer request, wherein said transferring depends on a preset priority order when two DMA transfer requests for the image data in the first and second buffers are received simultaneously.

Claim 2 (Previously Presented): The image processing method as claimed in claim 1, wherein said performing further stores the file of the image data in a storage unit which is provided internally or externally to an image processing apparatus which has each of the functions.

Claim 3 (Previously Presented): The image processing method as claimed in claim 2, wherein said performing further transfers the image data processed by each of the functions on one or a plurality of buses within the image processing apparatus.

Claim 4 (Previously Presented): The image processing method as claimed in claim 2, wherein said performing further carries out the processes of the two or more functions in response to an internal command and/or an external command of the image processing apparatus.

Claim 5 (Original): The image processing method as claimed in claim 4, wherein the external command is issued from one or a plurality of external apparatus coupled to the image processing apparatus via a network.

Claim 6 (Previously Presented): The image processing method as claimed in claim 1, wherein said storing further stores the file of the image data by adding specific information which enables identification of the file.

Claim 7 (Currently Amended): An image processing apparatus comprising:

a scanner configured to read a document and to output image data;

a facsimile communication unit configured to transmit and receive image data via a communication line;

a plotter configured to record an image on a recording medium based on image data; and

a control unit configured to control a process of one of said scanner, said facsimile communication unit and said plotter to process the image data in parallel while controlling at least another process of said scanner, said facsimile communication unit and said plotter,

said control unit is further configured to automatically store a file of the image data processed in parallel in a storage unit, independently of processes of said scanner, said facsimile communication unit and said plotter, said control unit including:

a buffer configured to temporarily buffer the image data on an image data bus line, said buffer including a first buffer and a second buffer;

a DMA transfer bus line configured to transfer the image data within said buffer by a DMA transfer; and

an image transfer unit configured to transfer the image data within said buffer to said DMA transfer bus line based on a DMA transfer request;

wherein a DMA transfer request is supplied to said image transfer unit when a storage capacity of at least one of said first and second buffers ~~buffer~~ occupied by the image data reaches a predetermined preset value, and the transfer of the image data within said first and second buffers depends on a preset priority order when two DMA requests for the image data in the first and second buffers are received simultaneously.

Claim 8 (Currently Amended): An image processing apparatus comprising:

means for reading a document and for outputting image data;

means for communicating image data via a communication line;

means for recording an image on a recording medium based on image data; and

means for controlling a process of one of said means for reading, said means for communicating and said means for recording to process the image data in parallel while

controlling at least another process of said means for reading, said means for communicating and said means for recording,

said means for controlling further automatically stores a file of the image data processed in parallel in means for storing, independently of processes of said means for reading, said means for communicating and said means for recording, wherein said means for controlling includes:

means for buffering the image data temporarily in a buffer, said buffer including a first buffer and a second buffer;

means for requesting a DMA transfer when a storage capacity of at least one of said first and second buffers ~~buffer~~ occupied by the image data reaches a predetermined preset value; and

means for transferring the image data within said buffer by a DMA transfer based on the means for requesting a DMA transfer, and said transferring depends on a preset priority order when two DMA transfer requests for the image data in the first and second buffers are received simultaneously.

Claim 9 (Previously Presented): The image processing apparatus as claimed in claim 7, wherein said storage unit is provided internally or externally to the image processing apparatus.

Claim 10 (Previously Presented): The image processing apparatus as claimed in claim 9, further comprising:

one or a plurality of buses transferring the image data processed by said scanner, said facsimile communication unit and said plotter within the image processing apparatus.

Claim 11 (Previously Presented): The image processing apparatus as claimed in claim 9, wherein said control unit controls two or more of said scanner, said facsimile communication unit and said plotter to process the image data in parallel in response to an internal command and/or an external command to the image processing apparatus.

Claim 12 (Original): The image processing apparatus as claimed in claim 11, wherein the external command is issued from one or a plurality of external terminals coupled to the image processing apparatus via a network.

Claim 13 (Previously Presented): The image processing apparatus as claimed in claim 7, wherein said control unit stores the file of the image data in the storage unit by adding specific information which enables identification of the file.

Claim 14 (Currently Amended): An image processing apparatus comprising:

an image data bus line configured to transfer image data;

an image reading part configured to read a document image and to output read image data to said image data bus line;

an image communicating part configured to receive image data from a communication line to output received image data to said image data bus line, and to receive transmitting image data from said image data bus line to transmit the transmitting image data to the communication line;

an image recording part configured to receive recording image data from said image data bus line and to record an image on a recording medium based on the recording image data; ~~and~~

a control unit configured to control one of said image reading part, said image communicating part and said image recording part which is unused for the processing of the image data to process the image data in parallel, while performing at least one of a reading operation by said image reading part, a recording operation by said image recording part, a transmitting operation by said image communicating part and a receiving operation by said image communicating part;

a buffer configured to temporarily buffer the read image data, the transmitting image data and the received image data on said image data bus line, said buffer including a first buffer and a second buffer;

a DMA transfer bus line configured to transfer the image data within said buffer by a DMA transfer; and

an image transfer unit configured to transfer the image data within said buffer to said DMA transfer bus line based on a DMA transfer request;

wherein a DMA transfer request is supplied to said image transfer unit when a storage capacity of at least one of said first and second buffers ~~buffer~~ occupied by the image data reaches a predetermined preset value, and wherein an image transfer by said image transfer unit depends on a preset priority order when two DMA transfer requests for the image data in the first and second buffers are received simultaneously.

Claims 15-21 (Canceled).

Claim 22 (Currently Amended): An image processing system comprising:

an image processing apparatus including:

an image reading part configured to read a document and to output image data;

an image communicating part configured to communicate image data via a communication line;

an image recording part configured to record an image on a recording medium based on image data; and

a control unit configured to control a process of one of said image reading part, said image communicating part and said image recording part in parallel while controlling at least another process of said image reading part, said image communicating part and said image recording part;

an electronic filing apparatus coupled to said image processing apparatus;

a storage unit coupled to said electronic filing apparatus;

a buffer configured to temporarily buffer the image data, said buffer including a first buffer and a second buffer;

a DMA transfer bus line configured to transfer the image data within said buffer by a DMA transfer; and

an image transfer unit configured to transfer the image data within said buffer to said DMA transfer bus line based on a DMA transfer request;

wherein a DMA transfer request is supplied to said image transfer unit when a storage capacity of at least one of said first and second buffers ~~buffer~~ occupied by the image data reaches a predetermined preset value, and wherein

said control unit is further configured to automatically store a file of the image data processed in parallel in said storage unit, independently of processes of said image reading part, said image communicating part and said image recording part, and

said transfer of the image data within the buffer to the DMA transfer bus line depends on a preset priority order when two DMA transfer requests for the image data in the first and second buffers are received simultaneously.

Claim 23 (Original): The image processing system as claimed in claim 22, wherein said image processing apparatus and said electronic filing apparatus are coupled via a network.

Claim 24 (Previously Presented): The image processing system as claimed in claim 23, wherein said image processing apparatus further includes a network connecting part configured to connect said image processing apparatus to said network.

Claim 25 (Currently Amended): An image processing system comprising:

an image processing apparatus including:

an image data bus line configured to transfer image data;

an image reading part configured to read a document image and to output read image data to said image data bus line;

an image communicating part configured to receive image data from a communication line to output received image data to said image data bus line, and to receive transmitting image data from said image data bus line to transmit the transmitting image data to the communication line;

an image recording part configured to record recording image data from said image data bus line and to record an image on a recording medium based on the recording image data;

a control unit configured to control one of said image reading part, said image communicating part and said image recording part which is unused for the processing of the image data to process the image data in parallel, while performing at least one of a reading operation by said image reading part, a recording operation by said image recording part, a

transmitting operation by said image communicating part and a receiving operation by said image communicating part;

an electronic filing apparatus coupled to said image processing apparatus;

a storage unit coupled to said electronic filing apparatus;

a buffer configured to temporarily buffer the read image data, the transmitting image data and the received image data on said image data bus line, said buffer including a first buffer and a second buffer;

a DMA transfer bus line configured to transfer the image data within said buffer by a DMA transfer; and

an image transfer unit configured to transfer the image data within said buffer to said DMA transfer bus line based on a DMA transfer request;

wherein a DMA transfer request is supplied to said image transfer unit when a storage capacity of at least one of said first and second buffers ~~buffer~~ occupied by the image data reaches a predetermined preset value; and wherein

said electronic filing apparatus is further configured to store automatically a file of the image data processed in parallel within said image processing apparatus into said storage unit, independently of the reading, recording, transmitting and receiving operations in said image processing apparatus, and

said transfer of the image data within the buffer to the DMA transfer bus line depends on a preset priority order when two DMA transfer requests for the image data in the first and second buffers are received simultaneously.

Claim 26 (Original): The image processing system as claimed in claim 25, wherein said image processing apparatus and said electronic filing apparatus are coupled via a network.

Claim 27 (Previously Presented): The image processing system as claimed in claim 26, wherein said image processing apparatus further includes a network connecting part configured to connect said image processing apparatus to said network.

Claims 28-30 (Cancelled).

Claim 31 (Previously Presented): The image processing apparatus as claimed in claim 14, further comprising:

an image storing part configured to buffer the image data on said DMA transfer bus line.

Claim 32 (Currently Amended): The image processing apparatus as claimed in claim 14, wherein:

said image data bus line includes a first image data bus line and a second image data bus line which are independently usable by operations carried out in parallel; and

wherein said ~~buffer includes a~~ first buffer is configured to temporarily buffer image data on the first image data bus line, and [[a]] said second buffer is configured to temporarily buffer image data on the second image data bus line.

Claim 33 (Cancelled).

Claim 34 (Currently Amended): The image processing apparatus as claimed in claim 32, ~~further comprising:~~ wherein

~~a DMA transfer bus line configured to transfer the image data within said buffer by a DMA transfer; and~~

~~an~~ the image transfer unit ~~part~~ is configured to ~~transfer the image data within said buffer to said DMA transfer bus line based on~~ receive the [[a]] DMA transfer request ~~which is received~~ at a preset timing[[,]]

~~said image transfer part is further configured to perform a DMA transfer of the image data within the first buffer or the second buffer depending on a preset priority order when DMA transfer requests for the image data within the first and second buffers are received simultaneously~~.

Claim 35 (Previously Presented): The image processing apparatus as claimed in claim 34, wherein the priority order is alternately switched every time the DMA transfer requests for the image data within the first and second buffers are received simultaneously.

Claim 36 (Previously Presented): The image processing apparatus as claimed in claim 31, wherein said image storing part includes first and second image storing parts configured to store the image data on said DMA transfer bus line, and the image data within said first image storing part is transferred to and stored in said second image storing part.

Claim 37 (Previously Presented): The image processing apparatus as claimed in claim 36, wherein said first image storing part is made up of a memory.

Claim 38 (Previously Presented): The image processing apparatus as claimed in claim 36, wherein said second image storing part is made up of a hard disk drive.